



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **BALLATO et. al**

Application Serial No.: **10/669,282**

5 Application Filed: **September 24, 2003**

Attorney Docket No.: **CECOM 5501**

For: **ELECTRODE-FREE RESONATOR STRUCTURES FOR FREQUENCY  
CONTROL, FILTERS AND SENSORS**

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**AMENDMENTS TO THE SPECIFICATION**

Delete the paragraph at page 4, line 18-page 5, line 4, and replace the deleted paragraph with the following replacement paragraph:

**BRIEF DESCRIPTION OF THE DRAWINGS**

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FIG'S 1A-1D are graphs illustrating various aspects of the relationship between decreased resonator thickness and motional impedance in a resonator with a thickness,  $t_2$ , of 1.65  $\mu\text{m}$ ;

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FIG'S 2A-2D are graphs illustrating various aspects of the relationship between decreased resonator thickness and motional impedance in a resonator with a decreased thickness,  $t_2$ , of 1.53  $\mu\text{m}$ ;

FIG'S 3A-3C are top, cross sectional and bottom views of a double-sided electrode-free resonator in accordance with the present invention;

FIG'S 4A-4B-4C are top, cross sectional and bottom views of a single-sided electrode-free resonator in accordance with the present invention;

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FIG'S 5A-5B-5C are top, cross sectional and bottom views of an double-sided electrode-free filter structure in accordance with the present invention;

FIG'S 6A-6B-6C are top, cross sectional and bottom views of a single-sided electrode-free filter structure in accordance with the present invention; and

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FIG'S 7A-7B are top and cross-sectional views of another electrode-free resonator in accordance with the present invention having a circular resonator area.